

**WHAT IS CLAIMED:**

1. A network system having a plurality of local nodes connected therewith, said local nodes each including a communication application programs, by which the local node is operated, each of said local nodes comprising:

band information obtaining means for obtaining band information required for controlling a communication band from said communication application program;

band information storing means for storing said band information obtained by said band information obtaining means as the band information of the local node;

band information delivering means for delivering the band information of the local node to the other local nodes connected to said network;

band information receiving means for receiving the band information delivered by said band information delivering means of the other local nodes and storing the band information of the other local nodes in said band information storing means;

band traffic calculating means for calculating a current band traffic for the local node to which it belongs on the basis of the band information of the local node to which it belongs and the band information of the other local nodes stored in said band information storing means; and

said band traffic calculating means assuming current band traffic that is obtained to be the band traffic of said network and controlling the band traffic of the local node to which it belongs on the basis of that assumption.

2. The network system as claimed in claim 1, wherein the band information includes an IP address, a port number, a band traffic, a data type, an operation communication application program number, and a process ID list.

3. The network system as claimed in claim 2, wherein  
said band traffic calculating means checks the type of data to be transmitted,  
assigns the band traffic requested from said communication application  
program to the data which data type is QoS, and

assigns the band traffic calculated using the band traffic set for BE type data,  
the band traffic occupied by QoS data, and the operation communication application  
program number to the data which data type is BE.

4. The network system as claimed in claim 2, wherein said band traffic calculating means controls the band traffic of the BE type data by changing the data transmission frequency depending on the assigned band traffic.

5. The network system as claimed in claim 1, wherein said band information delivering means sends the band information at regular intervals and when the communication application program starts the communication.

6. A communication band control method for controlling a communication band of a network system having a plurality of local nodes connected therewith, each of said local nodes taking the steps of:

obtaining band information required for controlling a communication band from a communication application program;

storing said obtained band information as the band information of the local node and delivering said band information to all the local nodes connected with said network;

storing band information delivered by other local nodes as band information of the other local nodes;

obtaining a current band traffic for the local node to which it belongs on the basis of the band information of the local node and the band information of the other local nodes, which has been stored; and

assuming the current band traffic for the local node to which it belongs that is obtained to be the traffic of said network and controlling the band traffic of the local node on the basis of that assumption.

7. A communication band control method as claimed in claim 6, wherein the delivery of the band information of the local node to other local nodes is executed in a broadcasting manner.

8. A communication band control method as claimed in claim 6, wherein an identifier for specifying an application program is stored with said band information.

9. A network system having a plurality of local nodes connected therewith, said local nodes each including a communication application programs, by which the local node is operated, each of said local nodes comprising:

    a band information obtaining unit which obtains band information required for controlling a communication band from said communication application program;

    a band information managing table which stores said band information obtained by said band information obtaining unit as the band information of the local node;

    a band information delivery unit which delivers the band information of the local node to the other local nodes connected to said network;

    a band information receiver which receives the band information delivered by said band information delivery units of the other local nodes and storing the band information of the other local nodes in said band information managing table;

    a band traffic calculator which calculates a current band traffic for the local node to which it belongs on the basis of the band information of the local node to which it belongs and the band information of the other local nodes stored in said band information managing table; and

    said band traffic calculator assuming current band traffic that is obtained to be the band traffic of said network and controlling the band traffic of the local node to which it belongs on the basis of that assumption.